Object ID	Use Cases - Scenario Planning Capability	Interview Source
U-339	**Use Cases** **for Scenario Planning at Pacific Missile Range Facility (PMRF)** **Prepared by: NAWCWD Point Mugu, CA** **Prepared on: 20 December 2000**	
U-1	# 1 Scope	
U-338	The Use Cases provided in this document describe the tasks that are currently being performed in support of scenario planning at the Pacific Missile Range Facility (PMRF).	
U-346	This document is a work in progress and will be updated periodically as new information is available. Interviews are being conducted and every effort is being made to identify the essential user tasks.	
U-3	# 2 Overview	
U-342	## *2.1 Scenario Planning Description*	Lincoln Wong, PMRF
U-4	The following narrative was derived from an e-mail message from Lincoln Wong to Rita Garcia (dated 23 October 2000) where Mr. Wong provided a high level description of the current standard operating procedure and showed how the scenario planning tool would fit in.	Lincoln Wong, PMRF
U-5	- An individual/company wants PMRF to test their product.	Lincoln Wong, PMRF
U-6	- The individual/company provides PMRF with a tentative scenario under which they want their testing to be conducted (e.g., Raytheon provides PMRF with a scenario for their SM-III test).	Lincoln Wong, PMRF
U-7	- The Scenario Planner must be able to write files that can be transferred to another Scenario Planner.	Lincoln Wong, PMRF
U-8	- The Scenario Planner must be able to write/export files in generic (text, MS Excel) and Scenario Planner format for e-mail or posting on the Web.	Lincoln Wong, PMRF
U-9	- The Scenario Planner must be able to import hazard patterns and make sensor and Operational Area assignments (e.g., tanker orbits, shooter, etc.).	Lincoln Wong, PMRF
U-10	- Files created on one Scenario Planner must be exportable and importable to/from another Scenario Planner system. The Scenario Planning tool would mainly be used by the PMRF team, but APL has recently expressed an interest in the tool. APL could do their preliminary planning on the tool and then ship what they come up with to PMRF.	Lincoln Wong, PMRF
U-11	- The Scenario Planner must have the ability to monitor the actuals versus	Lincoln Wong, PMRF

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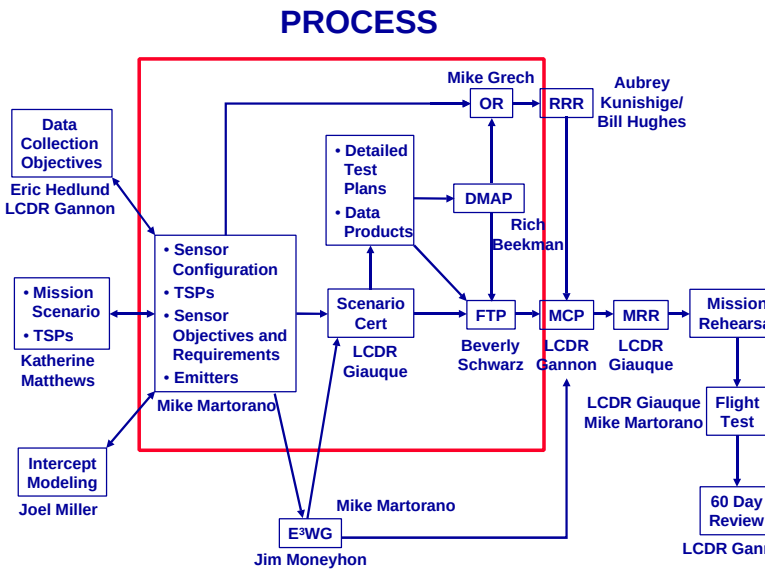
	the planned, to a user-defined fidelity that is set before the operation.	
U-12	- The Scenario Planner must be able to provide high level planned vs. actual post-event analysis. Support quick-look reports via import to MS Powerpoint. Allow accurate statistical evaluation of planned vs. actual.	Lincoln Wong, PMRF
U-347	## 2.2 Scenario Planning Illustration	
U-343	The illustration provided below depicts the current process employed at PMRF.	
U-345		
U-13	## 2.3 *Document Overview*	
U-344	The Use Cases are organized into the following subsections: - APL - RCC Operations Conductor, Real Time Rehearsal - OC - AUX Sensors - Program - Scenario Planning - Weapons Customers - Aerial Target, Profile Planning - Aerial Target, Real Time Scenario Operatons - Go/No-go - Flight Safety - A/C - Air Controller (Manual Only) - Real Time Computer Network Personnel - High Level Operations Assessment	

Object ID	Use Cases - Scenario Planning Capability	Interview Source
U-15	**3** APL – User Function	Kathy Matthews, APL
U-16	***3.1*** *Current User*	Kathy Matthews, APL
U-348	Katherine Matthews (JHU/APL), David Auh (JHU/APL), Elisa Shapiro	Kathy Matthews, APL
U-17	***3.2*** *Intent*	Kathy Matthews, APL
U-349	Support the range by developing the scenario missile trajectory and target trajectory.	Kathy Matthews, APL
U-430	Maintain CM control.	Kathy Matthews, APL
U-432	CM control of the plan should allow the user to modify and save the plan as a different version by user name, but not overwrite the original version of the plan.	Kathy Matthews, APL
U-431	Perform radar-tracking analysis (link margin, link, sensor coverage, trade-offs if there are gaps, etc.).	Kathy Matthews, APL
U-355	Support range safety.	Kathy Matthews, APL
U-18	***3.3*** *Entry Criteria*	Kathy Matthews, APL
U-19	***3.4*** *Inputs*	Kathy Matthews, APL
U-350	Be able to import nominal and Monte Carlo target and missile trajectories.	Kathy Matthews, APL
U-20	***3.5*** *Task Description*	Kathy Matthews, APL
U-351	Develop the scenario for the missile trajectory and target trajectory.	Kathy Matthews, APL
U-453	Be able to translate and rotate the missile trajectory, target, and ship aux as a unit.	Kathy Matthews, APL
U-352	Maintain CM control of the target and missile trajectories (AUX sensor-TSPS footprints received from outside the lab). (Note: This is lower priority.)	Kathy Matthews, APL
U-353	Develop the shooter Test Support Position (TSP), missile trajectory and the initial intercept debris.	Kathy Matthews, APL

Object ID	Use Cases - Scenario Planning Capability	Interview Source
U-454	Must be able to input the intercept debris pattern. (Note: Initial target trajectories are developed at APL.)	Kathy Matthews, APL
U-358	Release PLM, trajectory-AUX sensor TSPs, shooter TSP, and debris footprints. Be able to output as a file. << NOTE: Replace this text with a list that is to be provided. Action Item to Kathy: (1) Ask users to put together a list of import/export data so that it can be consolidated. (2) Review the list. >> << NOTE: Action Item to Graham: Identify output reports and format. >>	Kathy Matthews, APL
U-360	Create and release IR/RF signatures for target and missile signature data. Import/export IR/RF signatures.	Kathy Matthews, APL
U-361	Launch window planning. Looks at sun and moon data. Need to be able to import and display/use the solar/lunar data. Need to be able to import sun/moon criteria and have it be resident on the Scenario Planner.	Kathy Matthews, APL
U-362	Perform radar-tracking analysis for parameters: ast-to-target, and missile to target. Radar tracking analysis should include all aspects (e.g., roll angle). << NOTE: Action Item to Kathy to expand this description.	Kathy Matthews, APL
U-363	Calculate tracking parameters: estimated slant range, RCS and IR history, link margins, etc. << NOTE: Action Item to Kathy to add more detail. >>	Kathy Matthews, APL
U-365	Need to have the ability to import or enter emitter data and perform E3 analysis.	Kathy Matthews, APL
U-366	GPS location must be part of window planning. Need a process to determine where our RF emissions may interfere with satellites.	Kathy Matthews, APL
U-367	Need to be able to analyze link margins. Need to be able to use WGS-84.	Kathy Matthews, APL
U-368	Need to be able to download the GPS element set real time, screen KW solar and lunar exclusion satellite collision avoidance (COLA) results in a window. Need to be able to import COLA window closures and display.	Kathy Matthews, APL
U-371	Need scenario planner to be able to rotate the scenario, translate it, put the TSPs at the nominal target trajectory, handle time changes.	Kathy Matthews, APL
U-21	***3.6*** *Verification Actions*	Kathy Matthews, APL
U-372	Internal: presented to test and evaluation working groups, and to range safety working groups.	Kathy Matthews, APL
U-22	***3.7*** *Resources*	Kathy Matthews, APL
U-373	DALGR E3	Kathy Matthews, APL

Object ID	Use Cases - Scenario Planning Capability	Interview Source
U-23	***3.8*** *Outputs*	Kathy Matthews, APL
U-374	Scenarios posted to the website.	Kathy Matthews, APL
U-24	***3.9*** *Exit Criteria*	Kathy Matthews, APL
U-25	***3.10*** *Measurements*	Kathy Matthews, APL
U-26	***3.11*** *Schedule*	Kathy Matthews, APL
U-27	**4** RCC Operations Conductor, Real Time Rehearsal– User Function	Pat Alvarez, PMRF (RCC OC, Real Time Rehearsal)
U-28	***4.1*** *Current User*	Pat Alvarez, PMRF (RCC OC, Real Time Rehearsal)
U-29	Pat Alvarez, PMRF, IIT contractor)	Pat Alvarez, PMRF (RCC OC, Real Time Rehearsal)
U-30	***4.2*** *Intent*	Pat Alvarez, PMRF (RCC OC, Real Time Rehearsal)
U-31	Serve as single POC for the contractor (ITT).	Pat Alvarez, PMRF (RCC OC, Real Time Rehearsal)
U-32	Support and verify instrumentation for real time rehearsal. Provide extended Rehearsal capability, stimulate sensor to test entire network. << NOTE: Action Item to Graham to rewrite this >>	Pat Alvarez, PMRF (RCC OC, Real Time Rehearsal)
U-33	***4.3*** *Entry Criteria*	Pat Alvarez, PMRF (RCC OC, Real Time Rehearsal)
U-34	Receipt of a Schedule Request (SR) from the OC (Note: The SR is a request for instrumentation that specifies what radar and communication frequencies are to be used and any other special equipment needed to support the OP.)	Pat Alvarez, PMRF (RCC OC, Real Time Rehearsal)
U-35	Requirements review two (2) weeks prior to the OP.	Pat Alvarez, PMRF (RCC OC, Real Time Rehearsal)
U-36	Meeting with Radar personnel.	Pat Alvarez, PMRF

Object ID	Use Cases - Scenario Planning Capability	Interview Source
		(RCC OC, Real Time Rehearsal)
U-37	***4.4*** *Inputs*	Pat Alvarez, PMRF (RCC OC, Real Time Rehearsal)
U-38	SR from the OC. The SR should be able to be input into the scenario planner.	Pat Alvarez, PMRF (RCC OC, Real Time Rehearsal)
U-39	UDS documentation for the specific preplanning/planning phase. (Note: This is not a requirement.)	Pat Alvarez, PMRF (RCC OC, Real Time Rehearsal)
U-40	***4.5*** *Task Description*	Pat Alvarez, PMRF (RCC OC, Real Time Rehearsal)
U-46	Monitor the targets and radars real time. Provide a graphic status of radars indicating any problems with radar tracks (sidelobe vs. main beam). Allow radar "on-target" comparisions, i.e., show Delta Azimuth and Delta Elevation for all sensors vs. chosen source. << NOTE: Graham is to provide more detail. >>	Pat Alvarez, PMRF (RCC OC, Real Time Rehearsal)
U-47	Ensure that communication is taking place.	Pat Alvarez, PMRF (RCC OC, Real Time Rehearsal)
U-49	***4.6*** *Verification Actions*	Pat Alvarez, PMRF (RCC OC, Real Time Rehearsal)
U-50	Verify the instrumentation.	Pat Alvarez, PMRF (RCC OC, Real Time Rehearsal)
U-51	***4.7*** *Resources*	Pat Alvarez, PMRF (RCC OC, Real Time Rehearsal)
U-52	Contractor	Pat Alvarez, PMRF (RCC OC, Real Time Rehearsal)
U-53	OC	Pat Alvarez, PMRF (RCC OC, Real Time Rehearsal)
U-54	Radar equipment	Pat Alvarez, PMRF (RCC OC, Real Time Rehearsal)
U-55	***4.8*** *Outputs*	Pat Alvarez, PMRF (RCC OC, Real Time Rehearsal)
U-56	ITT Form	Pat Alvarez, PMRF (RCC OC, Real Time Rehearsal)
U-57	Summary of the OP (handwritten)	Pat Alvarez, PMRF

Object ID	Use Cases - Scenario Planning Capability	Interview Source
		(RCC OC, Real Time Rehearsal)
U-58	Raw data collected from the OP (as requested by the user)	Pat Alvarez, PMRF (RCC OC, Real Time Rehearsal)
U-59	SRR Report identifying what equipment was used (e.g., targets)	Pat Alvarez, PMRF (RCC OC, Real Time Rehearsal)
U-60	***4.9*** *Exit Criteria*	Pat Alvarez, PMRF (RCC OC, Real Time Rehearsal)
U-61	***4.10*** *Measurements*	Pat Alvarez, PMRF (RCC OC, Real Time Rehearsal)
U-62	***4.11*** *Schedule*	Pat Alvarez, PMRF (RCC OC, Real Time Rehearsal)
U-63	**5** OC – User Function	Aubrey Kunishige, PMRF (OC)
U-64	***5.1*** *Current User*	Aubrey Kunishige, PMRF (OC)
U-65	Aubrey Kunishige, Lead OC	Aubrey Kunishige, PMRF (OC)
U-66	***5.2*** *Intent*	Aubrey Kunishige, PMRF (OC)
U-67	Run the scenario real time.	Aubrey Kunishige, PMRF (OC)
U-68	***5.3*** *Entry Criteria*	Aubrey Kunishige, PMRF (OC)
U-69	Planning completed and verified.	Aubrey Kunishige, PMRF (OC)
U-70	***5.4*** *Inputs*	Aubrey Kunishige, PMRF (OC)
U-433	For each scenario, a map of the test area depicting the location of the following items is required:	Aubrey Kunishige, PMRF (OC)
U-434	a. Target launch point(s) and whole body/intact impact point(s)	Aubrey Kunishige, PMRF (OC)
U-435	b. Interceptor launch point(s) and whole body/intact impact point(s)	Aubrey Kunishige, PMRF (OC)

Object ID	Use Cases - Scenario Planning Capability	Interview Source
U-436	c. Location of radars and other Firing Unit (FU) elements	Aubrey Kunishige, PMRF (OC)
U-437	d. Location of intercept points	Aubrey Kunishige, PMRF (OC)
U-438	e. Target and interceptor ground tracks from launch to intercept	Aubrey Kunishige, PMRF (OC)
U-452	f. Location of each aux sensor participant (air and surface units)	Aubrey Kunishige, PMRF (OC)
U-439	Maps should also show coastlines, islands, other geographic features, and air routes (fixed and transient) in the test area. Maps must be annotated with latitude and longitude grids and show the distances between the FU elements. Notional diagrams are not acceptable and should be depicted by the scenario planner.	Aubrey Kunishige, PMRF (OC)
U-440	For each target considered in each scenario, the following plots are required:	Aubrey Kunishige, PMRF (OC)
U-441	a. Altitude vs. Time	Aubrey Kunishige, PMRF (OC)
U-442	b. Down-range Distance vs. Time	Aubrey Kunishige, PMRF (OC)
U-71	***5.5*** *Task Description*	Aubrey Kunishige, PMRF (OC)
U-72	Monitor the scenario. The PMRF scenario planner must depict how to support the data display requirements. In addition to trajectory displays of the interceptor(s) and target(s), the PMRF scenario planner should also depict how to support the real-time health/status data display requirements of the interceptor(s) and target(s). << Note: Most of these refer to real time OPs. Need to verify that the current system meets these needs. >>	Aubrey Kunishige, PMRF (OC)
U-73	Ensure flight safety and ground safety compliance. Display visual aids to the operator. Monitor and provide an alert when there is a problem.	Aubrey Kunishige, PMRF (OC)
U-444	The PMRF scenario planner should provide a detailed description of their flight safety management plan to support requirements. The following items should be addressed and supported by the scenario planner, if possible.	Aubrey Kunishige, PMRF (OC)
U-445	a. Minimum acceptable data sources (i.e., radars, vehicle telemetry, etc.) for the safety solution.	Aubrey Kunishige, PMRF (OC)
U-446	b. Instrumentation requirements for the target and interceptor	Aubrey Kunishige, PMRF (OC)
U-447	c. Flight termination criteria for the target and interceptor.	Aubrey Kunishige, PMRF (OC)
U-448	d. Flight termination footprints for the target and interceptor	Aubrey Kunishige, PMRF (OC)
U-449	e. Frequency range of command-destruct system	Aubrey Kunishige, PMRF (OC)

Object ID	Use Cases - Scenario Planning Capability	Interview Source
U-450	f. Use of mobile sensor platforms. TSPs for each mobile aux sensor participant (air and surface units) and detection range coverage and times of detection where appropriate.	Aubrey Kunishige, PMRF (OC)
U-451	g. Additional instrumentation investments required supporting range safety operations.	Aubrey Kunishige, PMRF (OC)
U-74	Monitor time on target. The time at which PMRF's radars first detect the target showing the SNR on its approach to PMRF must be marked on each plot; and also include a Link Margin analysis. Plots should indicate the time of intercept and the minimum SNR required for detection and processing. << goes with constraints >>	Aubrey Kunishige, PMRF (OC)
U-75	Monitor time on position for all participants.	Aubrey Kunishige, PMRF (OC)
U-76	Provide visual warning of any modifications to the plan. (Flag and identify the problem.)	Aubrey Kunishige, PMRF (OC)
U-77	Provide possible options for modifications	Aubrey Kunishige, PMRF (OC)
U-78	Play nominal back track real time.	Aubrey Kunishige, PMRF (OC)
U-79	Play simulation real time; watch nominal	Aubrey Kunishige, PMRF (OC)
U-80	***5.6*** *Verification Actions*	Aubrey Kunishige, PMRF (OC)
U-81	***5.7*** *Resources*	Aubrey Kunishige, PMRF (OC)
U-82	UNIX	Aubrey Kunishige, PMRF (OC)
U-83	***5.8*** *Outputs*	Aubrey Kunishige, PMRF (OC)
U-84	Real time data products.	Aubrey Kunishige, PMRF (OC)
U-85	Record of real time occurrences	Aubrey Kunishige, PMRF (OC)
U-86	Alternate scenario definition (i.e., what ifs?)	Aubrey Kunishige, PMRF (OC)
U-87	***5.9*** *Exit Criteria*	Aubrey Kunishige, PMRF (OC)
U-88	Approved mission (transition from working to certified plan).	Aubrey Kunishige, PMRF (OC)

Object ID	Use Cases - Scenario Planning Capability	Interview Source
U-89	***5.10*** *Measurements*	Aubrey Kunishige, PMRF (OC)
U-90	Collect data from the OP to post. For each scenario, PMRF must demonstrate their ability through the use of the scenario planner to satisfy the Interceptor and Target flight test data collection requirements. The PMRF scenario planner should be able to account for any mobile sensor or instrumentation platform that is deemed necessary. Post-intercept debris footprints for each scenario are required. Debris footprints (post-intercept and early flight termination) are required to pose minimal risks to the population, ground assets, air traffic, and sea traffic. Debris footprints are to be calculated in accordance with the safety ground rules provided by PMRF Flight/Range Safety personnel. For each scenario, target and interceptor debris footprints must consider an annually representative set of winds for the timeframe considered for a particular operation. Use of mean annual winds in lieu of timeframe representative winds should not be used.	Aubrey Kunishige, PMRF (OC)
U-443	In regards to telemetry, PMRF must provide a telemetry (TM) support plan. The ability of the scenario planner to develop this TM support plan, if possible, should be considered. Parameters such as the availability of the necessary hardware, bandwidth limits of the narrowband and wideband receivers in each Receiver-Combiner (RC) combination, and the recording capability (data rates and recording time limits) of the telemetry data recorders are of interest. The TM support plan must also include a Link Margin analysis. Plots showing the SNR of the telemetry signal from the target and interceptor as a function of time are required. Plots should indicate the time of intercept and the minimum SNR required for detection and processing.	Aubrey Kunishige, PMRF (OC)
U-91	***5.11*** *Schedule*	Aubrey Kunishige, PMRF (OC)
U-92	**6** OC – User Function	Bill Millard, HTS (OC)
U-93	***6.1*** *Current User*	Bill Millard, HTS (OC)
U-94	Bill Millard	Bill Millard, HTS (OC)
U-95	***6.2*** *Intent*	Bill Millard, HTS (OC)
U-96	Plan scenarios	Bill Millard, HTS (OC)
U-97	***6.3*** *Entry Criteria*	Bill Millard, HTS (OC)

Object ID	Use Cases - Scenario Planning Capability	Interview Source
U-98	***6.4*** *Inputs*	Bill Millard, HTS (OC)
U-99	***6.5*** *Task Description*	Bill Millard, HTS (OC)
U-100	Import the trajectory.	Bill Millard, HTS (OC)
U-101	Enter the timeline. Synchronize vehicle pats.	Bill Millard, HTS (OC)
U-102	Identify the sensors and assign them to vehicles. Provide a sensor assignment timeline graph. Output it as a file.	Bill Millard, HTS (OC)
U-103	Identify and position the OPS participants.	Bill Millard, HTS (OC)
U-104	Enter the vehicles (specifying their type and characteristics).	Bill Millard, HTS (OC)
U-105	Monitor the graphic overlay files.	Bill Millard, HTS (OC)
U-106	Profiles in both text and 3D graphical format. << NOTE: Bill is to add more detail. >>	Bill Millard, HTS (OC)
U-107	Perform the countdown for the mission start time. Allow mission play-back from an operator-selectable start time.	Bill Millard, HTS (OC)
U-108	Collect the trajectory information. Allow mission play-back from an operator-selectable start time.	Bill Millard, HTS (OC)
U-109	Iterate the scenarios (starting and restarting). Be able to modify a scenario and play it back from an operator-selected time.	Bill Millard, HTS (OC)
U-427	Be able to do planning functions and rehearsal in a standalone mode on a PC.	Bill Millard, HTS (OC)
U-428	Be able to run an INET simulator so it is possible to run standalone with simulated messages coming in. Be able to import file and run demon to kick off simulator.	Bill Millard, HTS (OC)
U-110	***6.6*** *Verification Actions*	Bill Millard, HTS (OC)
U-111	Verify that there are no flight safety violations.	Bill Millard, HTS (OC)
U-112	Verify that the mission critical requirements have been satisfied (e.g., TOT constraints, aspect angle plot). Verify mission critical constraints contained in TBD user input constraints are satisfied.	Bill Millard, HTS (OC)
U-113	Synchronize the vehicles. Be able to use multiple TBD methods such as manually inputting times for waypoints, or hooking and linking track points.	Bill Millard, HTS (OC)

Object ID	Use Cases - Scenario Planning Capability	Interview Source
U-114	***6.7*** *Resources*	Bill Millard, HTS (OC)
U-115	OC	Bill Millard, HTS (OC)
U-116	***6.8*** *Outputs*	Bill Millard, HTS (OC)
U-118	Operational Readiness Report. Include an indication on the plan that the OC has approved.	Bill Millard, HTS (OC)
U-119	Scenario Report. Need some level of TBD output report capability. << NOTE: Action Item for Graham to provide a list of possibilities >>	Bill Millard, HTS (OC)
U-120	Solipsis slide presentation in MS Powerpoint-compatible format.	Bill Millard, HTS (OC)
U-121	Go/No-go. Real-time decision aid based on entered constraints with graphical indication. Need a flashing alert with more detail selectable on what the problem was and options available from a previously input table.	Bill Millard, HTS (OC)
U-122	Report on the resources required (e.g., sensors allocated to the plan).	Bill Millard, HTS (OC)
U-123	Alternate scenario contingencies (i.e., what ifs?). Preplan options.	Bill Millard, HTS (OC)
U-124	Record and play-back of real time occurrences.	Bill Millard, HTS (OC)
U-125	***6.9*** *Exit Criteria*	Bill Millard, HTS (OC)
U-126	(Refer to Outputs paragraph above)	Bill Millard, HTS (OC)
U-127	***6.10*** *Measurements*	Bill Millard, HTS (OC)
U-128	***6.11*** *Schedule*	Bill Millard, HTS (OC)
U-129	**7** AUX Sensors – User Function	Mike Martorano, NAWCWD Point Mugu (AUX Sensors)
U-130	***7.1*** *Current User*	Mike Martorano, NAWCWD Point Mugu (AUX Sensors)
U-131	Mike Martorano, AUX participant	Mike Martorano, NAWCWD Point Mugu (AUX Sensors)

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U-132	***7.2*** *Intent*	Mike Martorano, NAWCWD Point Mugu (AUX Sensors)
U-133	Achieve data collection objectives (consistent with the Mission Scenario Test Support Plan (TSP) and Intercept Modeling, APL)	Mike Martorano, NAWCWD Point Mugu (AUX Sensors)
U-134	***7.3*** *Entry Criteria*	Mike Martorano, NAWCWD Point Mugu (AUX Sensors)
U-135	***7.4*** *Inputs*	Mike Martorano, NAWCWD Point Mugu (AUX Sensors)
U-136	TSP	Mike Martorano, NAWCWD Point Mugu (AUX Sensors)
U-137	Target System Requirements document	Mike Martorano, NAWCWD Point Mugu (AUX Sensors)
U-138	Operational Requirements	Mike Martorano, NAWCWD Point Mugu (AUX Sensors)
U-139	Data Management Analysis Plan (DMAP)	Mike Martorano, NAWCWD Point Mugu (AUX Sensors)
U-140	***7.5*** *Task Description*	Mike Martorano, NAWCWD Point Mugu (AUX Sensors)
U-455	Be able to import a PFPS route for the SRALT C-130's flight path.	Mike Martorano, NAWCWD Point Mugu (AUX Sensors)
U-141	Develop a unique checklist for each mission	Mike Martorano, NAWCWD Point Mugu (AUX Sensors)
U-142	Support for Aux Sensors to integrate into master countdown.	Mike Martorano, NAWCWD Point Mugu (AUX Sensors)
U-143	Establish voice communications with all sensors and determine initial status - T minus (-) 6 hours.	Mike Martorano, NAWCWD Point Mugu (AUX Sensors)
U-456	Record sensor status in checklist.	Mike Martorano, NAWCWD Point Mugu (AUX Sensors)
U-144	When countdown checks and simulations are done, send data to computer facility at PMRF.	Mike Martorano, NAWCWD Point Mugu (AUX Sensors)
U-145	Run through the checklist in simulation mode verifying all systems go at the various time checks up to weapon launch.	Mike Martorano, NAWCWD Point Mugu (AUX Sensors)
U-146	Coordinate with all OPS participants, keeping them on time.	Mike Martorano,

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		NAWCWD Point Mugu (AUX Sensors)
U-147	Coordinate development of the Flight Test Plan (FTP).	Mike Martorano, NAWCWD Point Mugu (AUX Sensors)
U-148	Prepare report to document lessons learned.	Mike Martorano, NAWCWD Point Mugu (AUX Sensors)
U-149	Overview of events: Mission Control Panel (MCP) -> Mission Readiness Review -> Mission Rehearsal -> Flight test -> 60-day review	Mike Martorano, NAWCWD Point Mugu (AUX Sensors)
U-150	***7.6*** *Verification Actions*	Mike Martorano, NAWCWD Point Mugu (AUX Sensors)
U-151	***7.7*** *Resources*	Mike Martorano, NAWCWD Point Mugu (AUX Sensors)
U-152	***7.8*** *Outputs*	Mike Martorano, NAWCWD Point Mugu (AUX Sensors)
U-153	FTP	Mike Martorano, NAWCWD Point Mugu (AUX Sensors)
U-154	Mission Checklist	Mike Martorano, NAWCWD Point Mugu (AUX Sensors)
U-155	Lessons Learned Report	Mike Martorano, NAWCWD Point Mugu (AUX Sensors)
U-156	OR -> RRR	Mike Martorano, NAWCWD Point Mugu (AUX Sensors)
U-157	DMAP	Mike Martorano, NAWCWD Point Mugu (AUX Sensors)
U-158	***7.9*** *Exit Criteria*	Mike Martorano, NAWCWD Point Mugu (AUX Sensors)
U-159	***7.10*** *Measurements*	Mike Martorano, NAWCWD Point Mugu (AUX Sensors)
U-160	***7.11*** *Schedule*	Mike Martorano, NAWCWD Point Mugu (AUX Sensors)
U-161	**8** Program – User Function	

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U-162	***8.1*** *Current User*	
U-163	***8.2*** *Intent*	
U-164	***8.3*** *Entry Criteria*	
U-165	***8.4*** *Inputs*	
U-166	***8.5*** *Task Description*	
U-167	***8.6*** *Verification Actions*	
U-168	***8.7*** *Resources*	
U-169	***8.8*** *Outputs*	
U-170	***8.9*** *Exit Criteria*	
U-171	***8.10*** *Measurements*	
U-172	***8.11*** *Schedule*	
U-173	**9** Scenario Planning – User Function	Doug Price (Scenario Planning)
U-174	***9.1*** *Current User*	Doug Price (Scenario Planning)
U-375	Doug	Doug Price (Scenario Planning)

Object ID	Use Cases - Scenario Planning Capability	Interview Source
U-175	***9.2*** *Intent*	Doug Price (Scenario Planning)
U-376	Populate the Scenario Planner with data derived from Team	Doug Price (Scenario Planning)
U-176	***9.3*** *Entry Criteria*	Doug Price (Scenario Planning)
U-377	Contracted to support Operations.	Doug Price (Scenario Planning)
U-378	E-mails/phone communications - Dennis Chen, Bill Millard	Doug Price (Scenario Planning)
U-177	***9.4*** *Inputs*	Doug Price (Scenario Planning)
U-379	Plan from Kathy Matthews (APL)	Doug Price (Scenario Planning)
U-380	GOG files from individual/company who generates the files	Doug Price (Scenario Planning)
U-381	Nominal flight path (in ASCII file format) from Bill Millard	Doug Price (Scenario Planning)
U-382	Working paper	Doug Price (Scenario Planning)
U-178	***9.5*** *Task Description*	Doug Price (Scenario Planning)
U-383	Import the nominal flight path into Scenario Flight Planner, creating the TBM Model used with the Scenario Planner. (Generated outside of the Planner.)	Doug Price (Scenario Planning)
U-384	Import the GOG files. Convert them into TDF overlay format.	Doug Price (Scenario Planning)
U-385	From Kathy Matthews, obtain overlays, or GOG files in Excel format. Identify the overlays. Dump them to ASCII files, and then import them to the Scenario Planner (hazard regions). Some of the overlays are generic overlays and some are specific to the current operation.	Doug Price (Scenario Planning)
U-386	Build the scenario.	Doug Price (Scenario Planning)
U-425	Open the new scenario. Add the TBM model that has been imported. Display the overlays. Start adding in the BQMs, ships. Input all vehicles. Look at the timing of launches. (The timing of launches is received from some type of report.)	Doug Price (Scenario Planning)
U-387	The scenario planner should provide a timeline document as an output.	Doug Price (Scenario Planning)
U-388	Select the waypoints for vehicles and synchronize the times.	Doug Price (Scenario Planning)
U-389	Add range sensors, or any sensors. Make sensor assignments.	Doug Price (Scenario

Object ID	Use Cases - Scenario Planning Capability	Interview Source
		Planning)
U-390	Telemetry	Doug Price (Scenario Planning)
U-391	Surveillance	Doug Price (Scenario Planning)
U-401	Note: The Scenario Planner should have a decision aid matrix.	Doug Price (Scenario Planning)
U-179	***9.6*** *Verification Actions*	Doug Price (Scenario Planning)
U-392	Automatic verification scripts in place.	Doug Price (Scenario Planning)
U-393	Planning tools verify that objectives are achieved (rehearsal).	Doug Price (Scenario Planning)
U-394	Play back the scenario in a preview mode (during the Planning Phase).	Doug Price (Scenario Planning)
U-180	***9.7*** *Resources*	Doug Price (Scenario Planning)
U-395	Any computer with the Scenario Planner.	Doug Price (Scenario Planning)
U-396	Server UNIX machine (Solaris)	Doug Price (Scenario Planning)
U-402	Ultra PC (Solaris)	Doug Price (Scenario Planning)
U-397	Microsoft Excel	Doug Price (Scenario Planning)
U-181	***9.8*** *Outputs*	Doug Price (Scenario Planning)
U-398	Scenario plan in controlled format	Doug Price (Scenario Planning)
U-399	Vehicle reports, describing vehicle location	Doug Price (Scenario Planning)
U-400	Waypoint reports	Doug Price (Scenario Planning)
U-182	***9.9*** *Exit Criteria*	Doug Price (Scenario Planning)
U-183	***9.10*** *Measurements*	Doug Price (Scenario Planning)
U-184	***9.11*** *Schedule*	Doug Price (Scenario Planning)
U-185	**10** Weapons Customers – User Function	

Object ID	Use Cases - Scenario Planning Capability	Interview Source
U-186	***10.1*** *Current User*	
U-187	***10.2*** *Intent*	
U-188	***10.3*** *Entry Criteria*	
U-189	***10.4*** *Inputs*	
U-190	***10.5*** *Task Description*	
U-191	***10.6*** *Verification Actions*	
U-192	***10.7*** *Resources*	
U-193	***10.8*** *Outputs*	
U-194	***10.9*** *Exit Criteria*	
U-195	***10.10*** *Measurements*	
U-196	***10.11*** *Schedule*	
U-197	**11** Aerial Target, Profile Planning– User Function	George Yanco, PMRF contractor (Aerial Target, Profile Planning)
U-198	***11.1*** *Current User*	George Yanco, PMRF contractor (Aerial Target, Profile Planning)
U-199	George Yanco, PMRF contractor	George Yanco, PMRF

Object ID	Use Cases - Scenario Planning Capability	Interview Source
		contractor (Aerial Target, Profile Planning)
U-200	***11.2*** *Intent*	George Yanco, PMRF contractor (Aerial Target, Profile Planning)
U-201	Build targets.	George Yanco, PMRF contractor (Aerial Target, Profile Planning)
U-202	***11.3*** *Entry Criteria*	George Yanco, PMRF contractor (Aerial Target, Profile Planning)
U-203	Verbal and written notification of: (a) how many targets; (b) what type of targets; (c) target assignments.	George Yanco, PMRF contractor (Aerial Target, Profile Planning)
U-204	***11.4*** *Inputs*	George Yanco, PMRF contractor (Aerial Target, Profile Planning)
U-205	ITT form (contract)	George Yanco, PMRF contractor (Aerial Target, Profile Planning)
U-206	Tasking from the OP Conductor and Program Manager.	George Yanco, PMRF contractor (Aerial Target, Profile Planning)
U-207	***11.5*** *Task Description*	George Yanco, PMRF contractor (Aerial Target, Profile Planning)
U-208	Start to build the mission profile according to the tasking, utilizing information received from the OP Conductor and the Program Manager.	George Yanco, PMRF contractor (Aerial Target, Profile Planning)
U-209	Add detailed specifications to targets. << NOTE: George is to review current capabilities in the Scenario Planner and see if they are adequate, and add details. >>	George Yanco, PMRF contractor (Aerial Target, Profile Planning)
U-210	Produce time marks.	George Yanco, PMRF contractor (Aerial Target, Profile Planning)
U-211	Generate the mission profile. (Note: the scenario planner should generate the profile.)	George Yanco, PMRF contractor (Aerial Target, Profile Planning)
U-212	Transfer data to a Microsoft Excel spreadsheet. Assume it to be positional	George Yanco, PMRF

Object ID	Use Cases - Scenario Planning Capability	Interview Source
	data with time ticks.	contractor (Aerial Target, Profile Planning)
U-213	Generate the Generalized Overlay Generator (GOG) file of the target flight path.	George Yanco, PMRF contractor (Aerial Target, Profile Planning)
U-215	***11.6*** *Verification Actions*	George Yanco, PMRF contractor (Aerial Target, Profile Planning)
U-216	***11.7*** *Resources*	George Yanco, PMRF contractor (Aerial Target, Profile Planning)
U-217	Microsoft Excel	George Yanco, PMRF contractor (Aerial Target, Profile Planning)
U-218	IITCS Tracking System	George Yanco, PMRF contractor (Aerial Target, Profile Planning)
U-219	MAGICC Tracking System	George Yanco, PMRF contractor (Aerial Target, Profile Planning)
U-220	***11.8*** *Outputs*	George Yanco, PMRF contractor (Aerial Target, Profile Planning)
U-221	Mission Profile	George Yanco, PMRF contractor (Aerial Target, Profile Planning)
U-222	GOG files in Microsoft Excel spreadsheet format.	George Yanco, PMRF contractor (Aerial Target, Profile Planning)
U-223	Raw data from the IITCS/MAGICC tracking systems.	George Yanco, PMRF contractor (Aerial Target, Profile Planning)
U-224	***11.9*** *Exit Criteria*	George Yanco, PMRF contractor (Aerial Target, Profile Planning)
U-225	Mission Profile complete.	George Yanco, PMRF contractor (Aerial Target, Profile Planning)
U-226	GOG files provided to the Program Manager in MS Excel format.	George Yanco, PMRF

Object ID	Use Cases - Scenario Planning Capability	Interview Source
		contractor (Aerial Target, Profile Planning)
U-227	Range Safety has given verbal acceptance/approval of the mission.	George Yanco, PMRF contractor (Aerial Target, Profile Planning)
U-228	***11.10*** *Measurements*	George Yanco, PMRF contractor (Aerial Target, Profile Planning)
U-229	***11.11*** *Schedule*	George Yanco, PMRF contractor (Aerial Target, Profile Planning)
U-230	**12** Aerial Target, Real Time Scenario Operations– User Function	George Yanco, PMRF contractor (Aerial Target, Real Time Scenario Operations)
U-231	***12.1*** *Current User*	George Yanco, PMRF contractor (Aerial Target, Real Time Scenario Operations)
U-232	George Yanco, PMRF contractor	George Yanco, PMRF contractor (Aerial Target, Real Time Scenario Operations)
U-233	***12.2*** *Intent*	George Yanco, PMRF contractor (Aerial Target, Real Time Scenario Operations)
U-234	Fly remote targets.	George Yanco, PMRF contractor (Aerial Target, Real Time Scenario Operations)
U-235	***12.3*** *Entry Criteria*	George Yanco, PMRF contractor (Aerial Target, Real Time Scenario Operations)
U-236	Mission scenario plan	George Yanco, PMRF contractor (Aerial Target, Real Time Scenario Operations)
U-237	***12.4*** *Inputs*	George Yanco, PMRF contractor (Aerial Target, Real Time Scenario Operations)
U-238	Tasking from the Aerial Targets Manager and Range Controller	George Yanco, PMRF contractor (Aerial Target, Real Time Scenario Operations)

Object ID	Use Cases - Scenario Planning Capability	Interview Source
U-239	***12.5*** *Task Description*	George Yanco, PMRF contractor (Aerial Target, Real Time Scenario Operations)
U-241	Monitor the displays.	George Yanco, PMRF contractor (Aerial Target, Real Time Scenario Operations)
U-242	Down-range and cross-range plots. Altitude vs. range. Need to provide this for all vehicles.	George Yanco, PMRF contractor (Aerial Target, Real Time Scenario Operations)
U-243	Synchronize multiple targets.	George Yanco, PMRF contractor (Aerial Target, Real Time Scenario Operations)
U-244	Monitor GOG file data compared to the actual operation.	George Yanco, PMRF contractor (Aerial Target, Real Time Scenario Operations)
U-245	Produce a Target Performance Report.	George Yanco, PMRF contractor (Aerial Target, Real Time Scenario Operations)
U-246	***12.6*** *Verification Actions*	George Yanco, PMRF contractor (Aerial Target, Real Time Scenario Operations)
U-247	***12.7*** *Resources*	George Yanco, PMRF contractor (Aerial Target, Real Time Scenario Operations)
U-248	GOG files	George Yanco, PMRF contractor (Aerial Target, Real Time Scenario Operations)
U-249	***12.8*** *Outputs*	George Yanco, PMRF contractor (Aerial Target, Real Time Scenario Operations)
U-250	Target Performance Report	George Yanco, PMRF contractor (Aerial Target, Real Time Scenario Operations)
U-251	***12.9*** *Exit Criteria*	George Yanco, PMRF contractor (Aerial Target, Real Time Scenario Operations)
U-252	Target Performance Report complete.	George Yanco, PMRF contractor (Aerial Target, Real Time Scenario Operations)

Object ID	Use Cases - Scenario Planning Capability	Interview Source
U-253	***12.10*** *Measurements*	George Yanco, PMRF contractor (Aerial Target, Real Time Scenario Operations)
U-254	***12.11*** *Schedule*	George Yanco, PMRF contractor (Aerial Target, Real Time Scenario Operations)
U-255	**13** Go /No-Go - User Function	Robert Kobee, Mitre (Go/No-Go)
U-256	***13.1*** *Current User*	Robert Kobee, Mitre (Go/No-Go)
U-257	Robert Kobee, Mitre	Robert Kobee, Mitre (Go/No-Go)
U-258	***13.2*** *Intent*	Robert Kobee, Mitre (Go/No-Go)
U-259	***13.3*** *Entry Criteria*	Robert Kobee, Mitre (Go/No-Go)
U-260	Mission definitions	Robert Kobee, Mitre (Go/No-Go)
U-261	Test objectives of mission	Robert Kobee, Mitre (Go/No-Go)
U-262	***13.4*** *Inputs*	Robert Kobee, Mitre (Go/No-Go)
U-263	SCC	Robert Kobee, Mitre (Go/No-Go)
U-264	Test Evaluation Working Group (TEWG)	Robert Kobee, Mitre (Go/No-Go)
U-265	PMRF Range	Robert Kobee, Mitre (Go/No-Go)
U-266	John Hopkins University (APL)	Robert Kobee, Mitre (Go/No-Go)
U-267	***13.5*** *Task Description*	Robert Kobee, Mitre (Go/No-Go)
U-268	Analysis of scenario mission real time analysis (Go/No-go)	Robert Kobee, Mitre (Go/No-Go)
U-269	"No-go" risk analysis (critical): identify options real time: (a) mitigation planning; (b) risk planning; (c) contingency planning; (d) rehearsal phase.	Robert Kobee, Mitre (Go/No-Go)
U-270	Voice and screen notification – in the rehearsal operations phase	Robert Kobee, Mitre (Go/No-Go)

Object ID	Use Cases - Scenario Planning Capability	Interview Source
U-271	***13.6*** *Verification Actions*	Robert Kobee, Mitre (Go/No-Go)
U-272	Voice notification during the rehearsal OPS phase (Note: this is how it is done now.).	Robert Kobee, Mitre (Go/No-Go)
U-273	On-screen notification. (Note: This is what we would like to get to with the decision tool).	Robert Kobee, Mitre (Go/No-Go)
U-274	On-going.	Robert Kobee, Mitre (Go/No-Go)
U-275	***13.7*** *Resources*	Robert Kobee, Mitre (Go/No-Go)
U-276	OPS conductor who is responsible as prime verification of GO.	Robert Kobee, Mitre (Go/No-Go)
U-277	Range/Flight Safety	Robert Kobee, Mitre (Go/No-Go)
U-278	MITRE	Robert Kobee, Mitre (Go/No-Go)
U-279	Program Office	Robert Kobee, Mitre (Go/No-Go)
U-280	APL	Robert Kobee, Mitre (Go/No-Go)
U-281	Tools during the planning phase: (a) Database; (b) Microsoft Access; and (c) JAVA.	Robert Kobee, Mitre (Go/No-Go)
U-282	***13.8*** *Outputs*	Robert Kobee, Mitre (Go/No-Go)
U-283	Red light (No-go)	Robert Kobee, Mitre (Go/No-Go)
U-284	Green Light (Go)	Robert Kobee, Mitre (Go/No-Go)
U-285	* NOTE: Will need a listing of all systems being monitored to determine what the decision tool needs to support.	Robert Kobee, Mitre (Go/No-Go)
U-286	***13.9*** *Exit Criteria*	Robert Kobee, Mitre (Go/No-Go)
U-287	***13.10*** *Measurements*	Robert Kobee, Mitre (Go/No-Go)
U-288	***13.11*** *Schedule*	Robert Kobee, Mitre (Go/No-Go)

Object ID	Use Cases - Scenario Planning Capability	Interview Source
U-289	**14** Flight Safety – User Function	
U-290	***14.1*** *Current User*	John Morris, Flight Safety - Point Mugu
U-457	John Morris, Adam Hajost, and Jim Hampson	John Morris, Flight Safety - Point Mugu
U-291	***14.2*** *Intent*	John Morris, Flight Safety - Point Mugu
U-458	Range (Flight) Safety. Define flight termination criteria if applicable, associated hazard areas, and if required, perform missile flight safety criteria as well.	John Morris, Flight Safety - Point Mugu
U-292	***14.3*** *Entry Criteria*	John Morris, Flight Safety - Point Mugu
U-459	Program office initiates Range Safety involvement.	John Morris, Flight Safety - Point Mugu
U-293	***14.4*** *Inputs*	John Morris, Flight Safety - Point Mugu
U-460	Range Safety Operational Plan (RSOP) (Has Flight Safety Termination), or Range Safety Approval - RSA (No Flight Termination System) Contains all patterns (Risk contours) (SIMDIS is currently using (displays))	John Morris, Flight Safety - Point Mugu
U-294	***14.5*** *Task Description*	John Morris, Flight Safety - Point Mugu
U-461	Prior to RSOP and RSA generation, analysis is performed.	John Morris, Flight Safety - Point Mugu
U-462	Provide the RSOP or RSA which includes flight termination limits, hazard areas and telemetry, and range display requirements.	John Morris, Flight Safety - Point Mugu
U-463	Verify displays making sure they meet the requirements of the RSOP and RSA: - During Operation, participation is man consoles (monitor displays) - Terminate missiles, if necessary - Real time support	John Morris, Flight Safety - Point Mugu
U-295	***14.6*** *Verification Actions*	John Morris, Flight Safety - Point Mugu
U-464	Continuously monitoring displays.	John Morris, Flight Safety - Point Mugu

Object ID	Use Cases - Scenario Planning Capability	Interview Source
U-296	***14.7*** *Resources*	John Morris, Flight Safety - Point Mugu
U-465	Prior to OP, work with APL and other contractors and Sandia National Labs	John Morris, Flight Safety - Point Mugu
U-466	Software: Range risk analysis tool (RRAT) (ACTA Corporation developer), TAOS - 6 degree of freedom simulation software (SANDIA)	John Morris, Flight Safety - Point Mugu
U-297	***14.8*** *Outputs*	John Morris, Flight Safety - Point Mugu
U-470	RSOP and RSA final output	John Morris, Flight Safety - Point Mugu
U-471	Probability of Impact (PI)	John Morris, Flight Safety - Point Mugu
U-472	Expected Casualty (EC)	John Morris, Flight Safety - Point Mugu
U-473	Grid files output of RRAT	John Morris, Flight Safety - Point Mugu
U-298	***14.9*** *Exit Criteria*	John Morris, Flight Safety - Point Mugu
U-474	Mission Complete.	John Morris, Flight Safety - Point Mugu
U-299	***14.10*** *Measurements*	
U-475	The system is currently very slow and would not be of value if it were used real time.	
U-300	***14.11*** *Schedule*	
U-301	**15** AIC – Air Controller (Manual Only) – User Function	
U-302	***15.1*** *Current User*	
U-303	***15.2*** *Intent*	

Object ID	Use Cases - Scenario Planning Capability	Interview Source
U-304	***15.3*** *Entry Criteria*	
U-305	***15.4*** *Inputs*	
U-306	***15.5*** *Task Description*	
U-307	***15.6*** *Verification Actions*	
U-308	***15.7*** *Resources*	
U-309	***15.8*** *Outputs*	
U-310	***15.9*** *Exit Criteria*	
U-311	***15.10*** *Measurements*	
U-312	***15.11*** *Schedule*	
U-313	**16** Real Time Computer Network Personnel	Steve Pringle (Real Time Computer Network Personnel)
U-314	***16.1*** *Current User*	Steve Pringle (Real Time Computer Network Personnel)
U-315	Steve Pringle	Steve Pringle (Real Time Computer Network Personnel)
U-316	***16.2*** *Intent*	Steve Pringle (Real Time Computer Network Personnel)
U-317	Configure the range software to support OPS.	Steve Pringle (Real Time Computer Network Personnel)

Object ID	Use Cases - Scenario Planning Capability	Interview Source
U-318	***16.3*** *Entry Criteria*	Steve Pringle (Real Time Computer Network Personnel)
U-319	Receive the IP hardcopy from RCC prior to pre-planning.	Steve Pringle (Real Time Computer Network Personnel)
U-320	***16.4*** *Inputs*	Steve Pringle (Real Time Computer Network Personnel)
U-321	IP hardcopy for rehearsal.	Steve Pringle (Real Time Computer Network Personnel)
U-322	***16.5*** *Task Description*	Steve Pringle (Real Time Computer Network Personnel)
U-326	***16.6*** *Verification Actions*	Steve Pringle (Real Time Computer Network Personnel)
U-327	Identify configuration problems, if any occur.	Steve Pringle (Real Time Computer Network Personnel)
U-328	Reconfigure the range software, if necessary.	Steve Pringle (Real Time Computer Network Personnel)
U-329	***16.7*** *Resources*	Steve Pringle (Real Time Computer Network Personnel)
U-330	OC, RCC, and real time computer network personnel.	Steve Pringle (Real Time Computer Network Personnel)
U-331	Range safety support.	Steve Pringle (Real Time Computer Network Personnel)
U-332	***16.8*** *Outputs*	Steve Pringle (Real Time Computer Network Personnel)
U-333	Vehicle ID Table	Steve Pringle (Real Time Computer Network Personnel)
U-334	Sensor ID Table	Steve Pringle (Real Time Computer Network Personnel)
U-335	***16.9*** *Exit Criteria*	Steve Pringle (Real Time Computer Network Personnel)

Object ID	Use Cases - Scenario Planning Capability	Interview Source
U-336	***16.10*** *Measurements*	Steve Pringle (Real Time Computer Network Personnel)
U-337	***16.11*** *Schedule*	Steve Pringle (Real Time Computer Network Personnel)
U-403	**17 High Level Operations Assessment - User Function**	(High Level Operations Assessment)
U-405	***17.1 Current User***	(High Level Operations Assessment)
U-415	Monitor function	(High Level Operations Assessment)
U-406	***17.2 Intent***	(High Level Operations Assessment)
U-416	Run the system in a Monitor mode.	(High Level Operations Assessment)
U-417	Perform a functional assessment of the target system in its environment.	(High Level Operations Assessment)
U-407	***17.3 Entry Criteria***	(High Level Operations Assessment)
U-408	***17.4 Inputs***	(High Level Operations Assessment)
U-409	***17.5 Task Description***	(High Level Operations Assessment)
U-418	Watch the operation. View the tactical display.	(High Level Operations Assessment)
U-419	Load the scenario.	(High Level Operations Assessment)
U-426	Load the overlays, and turn them on.	(High Level Operations Assessment)
U-420	There is no event message or launch message to indicate where in the scenario time they currently are. - Should be able to link to the OP clock.	(High Level Operations Assessment)

Object ID	Use Cases - Scenario Planning Capability	Interview Source
U-421	Should be able to synchronize to their event message. Manually synchronize T-30 in the system with the scenario clock display.	(High Level Operations Assessment)
U-422	Bring up the altitude plot that shows the plan profile for TBMs - time or down-range from the nominal launch point. Making DX - altitude plot is based upon track in current track database in the internal display. Cannot plot variables in the current event. It is currently altitude on the "y" or either scenario time or down-range. Provide a generic x/y plotter capability.	(High Level Operations Assessment)
U-423	Monitor system resources, CPUs, or memory usage test features that are operationally intensive.	(High Level Operations Assessment)
U-424	Record DX available for playback.	(High Level Operations Assessment)
U-410	***17.6 Verification Actions***	(High Level Operations Assessment)
U-411	***17.7 Resources***	(High Level Operations Assessment)
U-412	***17.8 Outputs***	(High Level Operations Assessment)
U-413	***17.9 Exit Criteria***	(High Level Operations Assessment)
U-414	***17.10 Measurements***	(High Level Operations Assessment)
U-404	***17.11*** *Schedule*	(High Level Operations Assessment)